

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:

10/688,193

Source:

TFW/6

Date Processed by STIC:

4/20/07

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IFW16

## RAW SEQUENCE LISTING

DATE: 04/20/2007

PATENT APPLICATION: US/10/688,193

TIME: 11:26:59

Input Set : A:\41673322.APP

Output Set: N:\CRF4\04202007\J688193.raw

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3 <110> APPLICANT: WOODS, VIRGIL L. JR.
5 <120> TITLE OF INVENTION: METHODS FOR CRYSTALLOGRAPHIC STRUCTURE DETERMINATION
6   EMPLOYING HYDROGEN EXCHANGE ANALYSIS
8 <130> FILE REFERENCE: 041673-3202
10 <140> CURRENT APPLICATION NUMBER: 10/688,193
11 <141> CURRENT FILING DATE: 2003-10-17
13 <150> PRIOR APPLICATION NUMBER: 60/419,651
14 <151> PRIOR FILING DATE: 2002-10-18
16 <160> NUMBER OF SEQ ID NOS: 17
18 <170> SOFTWARE: PatentIn Ver. 3.3
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 104
22 <212> TYPE: PRT
23 <213> ORGANISM: Equus caballus
25 <400> SEQUENCE: 1
26 Gly Asp Val Glu Lys Gly Lys Lys Ile Phe Val Gln Lys Cys Ala Gln
27   1           5           10           15
29 Cys His Thr Val Glu Lys Gly Gly Lys His Lys Thr Gly Pro Asn Leu
30           20           25           30
32 His Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro Gly Phe Thr Tyr
33   35           40           45
35 Thr Asp Ala Asn Lys Asn Lys Gly Ile Thr Trp Lys Glu Glu Thr Leu
36   50           55           60
38 Met Glu Tyr Leu Glu Asn Pro Lys Lys Tyr Ile Pro Gly Thr Lys Met
39   65           70           75           80
41 Ile Phe Ala Gly Ile Lys Lys Lys Thr Glu Arg Glu Asp Leu Ile Ala
42           85           90           95
44 Tyr Leu Lys Lys Ala Thr Asn Glu
45           100
48 <210> SEQ ID NO: 2
49 <211> LENGTH: 289
50 <212> TYPE: PRT
51 <213> ORGANISM: Homo sapiens
53 <400> SEQUENCE: 2
54 Ser Gly Lys Lys Val Thr Leu Asn Pro Ser Asp Pro Glu His Gly Gln
55   1           5           10           15
57 Ile Gly His Gly Asp Val Val Asn Leu Thr Gly Glu Ala Gly Gln Glu
58           20           25           30
60 Pro Gly Gly Leu Val Val Pro Pro Thr Asp Ala Pro Val Ser Pro Thr
61   35           40           45
63 Thr Leu Tyr Val Glu Asp Ile Ser Glu Pro Pro Leu His Asp Phe Tyr
64   50           55           60
66 Cys Ser Arg Leu Leu Asp Leu Val Phe Leu Leu Asp Gly Ser Ser Arg

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67 65          70          75          80
69 Leu Ser Glu Ala Glu Phe Glu Val Leu Lys Ala Phe Val Val Asp Met
70          85          90          95
72 Met Glu Arg Leu Arg Val Ser Gln Lys Trp Val Arg Val Ala Val Val
73          100          105          110
75 Glu Tyr His Asp Gly Ser His Ala Tyr Ile Gly Leu Lys Asp Arg Lys
76          115          120          125
78 Arg Pro Ser Glu Leu Arg Arg Ile Ala Ser Gln Val Lys Tyr Ala Gly
79          130          135          140
81 Ser Gln Val Ala Ser Thr Ser Glu Val Leu Lys Tyr Thr Leu Phe Gln
82 145          150          155          160
84 Ile Phe Ser Lys Ile Asp Arg Pro Glu Ala Ser Arg Ile Ala Leu Leu
85          165          170          175
87 Leu Met Ala Ser Gln Glu Pro Gln Arg Met Ser Arg Asn Phe Val Arg
88          180          185          190
90 Tyr Val Gln Gly Leu Lys Lys Lys Val Ile Val Ile Pro Val Gly
91          195          200          205
93 Ile Gly Pro His Ala Asn Leu Lys Gln Ile Arg Leu Ile Glu Lys Gln
94          210          215          220
96 Ala Pro Glu Asn Lys Ala Phe Val Leu Ser Ser Val Asp Glu Leu Glu
97 225          230          235          240
99 Gln Gln Arg Asp Glu Ile Val Ser Tyr Leu Cys Asp Leu Ala Pro Glu
100          245          250          255
102 Ala Pro Pro Pro Thr Leu Pro Pro His Met Ala Gln Val Thr Val Gly
103          260          265          270
105 Pro Gly Leu Leu Gly Val Ser Thr Leu Gly Pro Lys Arg Asn Ser Met
106          275          280          285
108 Val
112 <210> SEQ ID NO: 3
113 <211> LENGTH: 213
114 <212> TYPE: PRT
115 <213> ORGANISM: Gallus gallus
117 <400> SEQUENCE: 3
118 Met Val His Gln Phe Phe Arg Asp Met Asp Asp Glu Glu Ser Trp Ile
119 1          5          10          15
121 Lys Glu Lys Lys Leu Leu Val Ser Ser Glu Asp Tyr Gly Arg Asp Leu
122          20          25          30
124 Thr Gly Val Gln Asn Leu Arg Lys Lys His Lys Arg Leu Glu Ala Glu
125          35          40          45
127 Leu Ala Ala His Glu Pro Ala Ile Gln Ser Val Leu Asp Thr Gly Lys
128          50          55          60
130 Lys Leu Ser Asp Asp Asn Thr Ile Gly Lys Glu Glu Ile Gln Gln Arg
131 65          70          75          80
133 Leu Ala Gln Phe Val Asp His Trp Lys Glu Leu Lys Gln Leu Ala Ala
134          85          90          95
136 Ala Arg Gly Gln Arg Leu Glu Glu Ser Leu Glu Tyr Gln Gln Phe Val
137          100          105          110
139 Ala Asn Val Glu Glu Glu Glu Ala Trp Ile Asn Glu Lys Met Thr Leu
140          115          120          125

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142 Val Ala Ser Glu Asp Tyr Gly Asp Thr Leu Ala Ala Ile Gln Gly Leu
143      130      135      140
145 Leu Lys Lys His Glu Ala Phe Glu Thr Asp Phe Thr Val His Lys Asp
146 145      150      155      160
148 Arg Val Asn Asp Val Cys Ala Asn Gly Glu Asp Leu Ile Lys Lys Asn
149      165      170      175
151 Asn His His Val Glu Asn Ile Thr Ala Lys Met Lys Gly Leu Lys Gly
152      180      185      190
154 Lys Val Ser Asp Leu Glu Lys Ala Ala Ala Gln Arg Lys Ala Lys Leu
155      195      200      205
157 Asp Glu Asn Ser Ala
158      210
161 <210> SEQ ID NO: 4
162 <211> LENGTH: 213
163 <212> TYPE: PRT
164 <213> ORGANISM: Gallus gallus
166 <400> SEQUENCE: 4
167 Met Val His Gln Phe Phe Arg Asp Met Asp Asp Glu Glu Ser Trp Ile
168 1      5      10      15
170 Lys Glu Lys Lys Leu Leu Val Ser Ser Glu Asp Tyr Gly Arg Asp Leu
171      20      25      30
173 Thr Gly Val Gln Asn Leu Arg Lys Lys His Lys Arg Leu Glu Ala Glu
174      35      40      45
176 Leu Ala Ala His Glu Pro Ala Ile Gln Ser Val Leu Asp Thr Gly Lys
177      50      55      60
179 Lys Leu Ser Asp Asp Asn Thr Ile Gly Lys Glu Glu Ile Gln Gln Arg
180 65      70      75      80
182 Leu Ala Gln Phe Val Asp His Trp Lys Glu Leu Lys Gln Leu Ala Ala
183      85      90      95
185 Ala Arg Gly Gln Arg Leu Glu Glu Ser Leu Glu Tyr Gln Gln Phe Val
186      100      105      110
188 Ala Asn Val Glu Glu Glu Glu Ala Trp Ile Asn Glu Lys Met Thr Leu
189      115      120      125
191 Val Ala Ser Glu Asp Tyr Gly Asp Thr Leu Ala Ala Ile Gln Gly Leu
192      130      135      140
194 Leu Lys Lys His Glu Ala Phe Glu Thr Asp Phe Thr Val His Lys Asp
195 145      150      155      160
197 Arg Val Asn Asp Val Cys Ala Asn Gly Glu Asp Leu Ile Lys Lys Asn
198      165      170      175
200 Asn His His Val Glu Asn Ile Thr Ala Lys Met Lys Gly Leu Lys Gly
201      180      185      190
203 Lys Val Ser Asp Leu Glu Lys Ala Ala Ala Gln Arg Lys Ala Lys Leu
204      195      200      205
206 Asp Glu Asn Ser Ala
207      210
210 <210> SEQ ID NO: 5
211 <211> LENGTH: 415
212 <212> TYPE: PRT
213 <213> ORGANISM: Artificial Sequence

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215 &lt;220&gt; FEATURE:

216 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
217 protein construct

219 &lt;400&gt; SEQUENCE: 5

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220 Ser Ile Glu Ile Pro Ala Gly Leu Thr Glu Leu Leu Gln Gly Phe Thr
221   1           5           10           15
223 Val Glu Val Leu Arg His Gln Pro Ala Asp Leu Leu Glu Phe Ala Leu
224           20           25           30
226 Gln His Phe Thr Arg Leu Gln Gln Glu Asn Glu Arg Lys Gly Ala Ala
227           35           40           45
229 Arg Phe Gly His Glu Gly Arg Thr Trp Gly Asp Ala Gly Ala Ala Ala
230           50           55           60
232 Gly Gly Gly Thr Pro Ser Lys Gly Val Asn Phe Ala Glu Glu Pro Met
233   65           70           75           80
235 Arg Ser Asp Ser Glu Asn Gly Glu Glu Glu Glu Ala Ala Glu Ala Gly
236           85           90           95
238 Ala Phe Asn Ala Pro Val Ile Asn Arg Phe Thr Arg Arg Ala Ser Val
239           100          105          110
241 Cys Ala Glu Ala Tyr Asn Pro Asp Glu Glu Glu Asp Asp Ala Glu Ser
242           115          120          125
244 Arg Ile Ile His Pro Lys Thr Asp Asp Gln Arg Asn Arg Leu Gln Glu
245           130          135          140
247 Ala Cys Lys Asp Ile Leu Leu Phe Lys Asn Leu Asp Pro Glu Gln Met
248  145          150          155          160
250 Ser Gln Val Leu Asp Ala Met Phe Glu Lys Leu Val Lys Glu Gly Glu
251           165          170          175
253 His Val Ile Asp Gln Gly Asp Asp Gly Asp Asn Phe Tyr Val Ile Asp
254           180          185          190
256 Arg Gly Thr Phe Asp Ile Tyr Val Lys Cys Asp Gly Val Gly Arg Cys
257           195          200          205
259 Val Gly Asn Tyr Asp Asn Arg Gly Ser Phe Gly Glu Leu Ala Leu Met
260           210          215          220
262 Tyr Asn Thr Pro Arg Ala Ala Thr Ile Thr Ala Thr Ser Pro Gly Ala
263  225          230          235          240
265 Leu Trp Gly Leu Asp Arg Val Thr Phe Arg Arg Ile Ile Val Lys Asn
266           245          250          255
268 Asn Ala Lys Lys Arg Lys Met Tyr Glu Ser Phe Ile Glu Ser Leu Pro
269           260          265          270
271 Phe Leu Lys Ser Leu Glu Val Ser Glu Arg Leu Lys Val Val Asp Val
272           275          280          285
274 Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala Gln Gly
275           290          295          300
277 Asp Ser Ala Asp Ser Phe Phe Ile Val Glu Ser Gly Glu Val Arg Ile
278  305          310          315          320
280 Thr Met Lys Arg Lys Gly Lys Ser Asp Ile Glu Glu Asn Gly Ala Val
281           325          330          335
283 Glu Ile Ala Arg Cys Leu Arg Gly Gln Tyr Phe Gly Glu Leu Ala Leu
284           340          345          350
286 Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly Thr Val

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287          355          360          365
289 Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu Gly Pro
290          370          375          380
292 Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu Gln Leu
293 385          390          395          400
295 Val Ala Leu Phe Gly Thr Asn Met Asp Ile Val Glu Pro Thr Ala
296          405          410          415
299 <210> SEQ ID NO: 6
300 <211> LENGTH: 27
301 <212> TYPE: PRT
302 <213> ORGANISM: Artificial Sequence
304 <220> FEATURE:
305 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
306 peptide
308 <400> SEQUENCE: 6
309 Ser Ile Glu Ile Pro Ala Gly Leu Thr Glu Leu Leu Gln Gly Phe Thr
310 1          5          10          15
312 Val Glu Val Leu Arg His Gln Pro Ala Asp Leu
313 20          25
316 <210> SEQ ID NO: 7
317 <211> LENGTH: 102
318 <212> TYPE: PRT
319 <213> ORGANISM: Artificial Sequence
321 <220> FEATURE:
322 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
323 peptide
325 <400> SEQUENCE: 7
326 Leu Leu Glu Phe Ala Leu Gln His Phe Thr Arg Leu Gln Gln Glu Asn
327 1          5          10          15
329 Glu Arg Lys Gly Ala Ala Arg Phe Gly His Glu Gly Arg Thr Trp Gly
330 20          25          30
332 Asp Ala Gly Ala Ala Ala Gly Gly Thr Pro Ser Lys Gly Val Asn
333 35          40          45
335 Phe Ala Glu Glu Pro Met Arg Ser Asp Ser Glu Asn Gly Glu Glu Glu
336 50          55          60
338 Glu Ala Ala Glu Ala Gly Ala Phe Asn Ala Pro Val Ile Asn Arg Phe
339 65          70          75          80
341 Thr Arg Arg Ala Ser Val Cys Ala Glu Ala Tyr Asn Pro Asp Glu Glu
342 85          90          95
344 Glu Asp Asp Ala Glu Ser
345 100
348 <210> SEQ ID NO: 8
349 <211> LENGTH: 17
350 <212> TYPE: PRT
351 <213> ORGANISM: Artificial Sequence
353 <220> FEATURE:
354 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
355 peptide
357 <400> SEQUENCE: 8

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**VERIFICATION SUMMARY**

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